Name: HW99 Similar Triangles & Ratios

*Mr. Tiénou-Gustafson & Mr. Bielmeier*

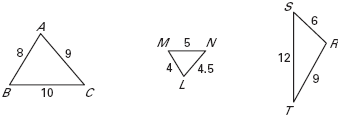
Geometry, Period

Due Date: Wed, 11 Feb 2015

**Geometry**

**Homework**



**Failure to show all work and write in complete sentences will result in LaSalle.**

1) Is either Δ*LMN* o*r* Δ*RST* similar to Δ*ABC*?

Write a similarity statement (∆\_ \_ \_ ~ ∆\_ \_ \_) & explain   
how you know (use the word “ratio” in your answer)

**Directions: 1st,** Determine whether the two triangles are similar. 2nd, Write a similarity statement & explain the rule (AA, SSS, SAS) if they are; explain why not if not. 3rd, if they are similar, find the missing side.

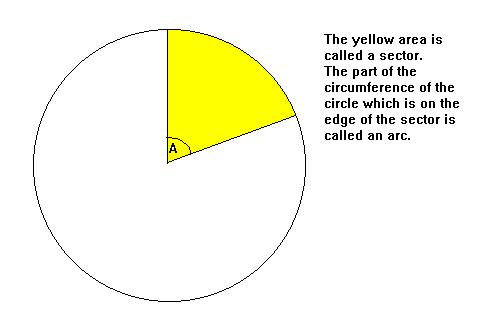
|  |  |  |
| --- | --- | --- |
| 2) Similar? \_\_\_\_\_\_\_\_ Why/why not?    *Similarity statement:*  **18**  **x**  *∆\_\_\_\_\_\_~ ∆\_\_\_\_\_\_*  *Find x (if possible)* | | 3. Similar? \_\_\_\_\_\_\_ Why?    **x**  *Similarity statement:*  **80**  **100**  **68**  **73**  *Find x (if possible)* |
| 4. Similar? \_\_\_\_\_\_\_ Why?    **15**  **14**  **x**  **9**    *Similarity statement:*  *Find x (if possible)* | | 5. Similar? \_\_\_\_\_\_\_ Why?    **x**  **4**  **3**  **6**  *Similarity statement:*  *Find x (if possible)* |
| 6) In order to estimate the height *h* of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree. | | |
|  | a. What is the height *h* (in feet) of the pine tree?  b. Another student also wants to see the top of the tree. The other student is 5.5 feet tall. If the mirror is to remain 3 feet from the student's feet, how far from the base of the tree should the mirror be placed? | |
| 7. (Show your work… always!) | | |

**Other Review for the THURSDAY TEST!**

***(Test includes Pythagorean theorem, distance formula, triangle types, congruent triangles, ratios & similar triangles)***

C

B

1.  What is the area of the circle if r =12?
2. If m∠A = 60°, what ratio expresses the size of   
   ∠A in relation to the number of degrees in the entire circle?
3. Using this ratio, what is the area of the shaded portion?
4. If you drew a line connecting points B & C, what type of triangle would this create?
5. What is the length of ?
6. Draw a ray that bisects angle A. Label points D where this ray intersects . How long are BD and DC?
7. What kind of triangle is ∆ABD?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ label the parts of the triangle a, b, and c.

1. What is the length of (in simplified radical form AND decimal form)
2. What rule would demonstrate that ∆ABD ≅ ∆ACD? (be sure to mark this info on the triangles)
3. What is the area of ∆ABC?